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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,720

11/05/2004

Kanji Otsuka

KUB-001

6742

32628

7590

05/22/2007

KANESAKA BERNER AND PARTNERS LLP

1700 DIAGONAL RD

SUITE 310

ALEXANDRIA, VA 22314-2848

EXAMINER

LE. DON P

ART UNIT

PAPER NUMBER

2819

MAIL DATE

DELIVERY MODE

05/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/511,720

Applicant(s)

OTSUKA ET AL.

Examiner

Don P. Le

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 15-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-18 is/are rejected.
- 7) ☒ Claim(s) 19-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Tokuo et al. (JP 08-242151).

3. With respect to claim 15, figure 1 of Tokuo teaches a high-speed signal transmission system comprising:

waveform analysis means for analyzing a defect relative to signal transmission of a line, (notice not shown, however, it has to be included in circuitry in order to know if there is a defect)

waveform reshaping means (6 and 7, reshape input signal) for reshaping a sending waveform,

regulator means (circuitry that includes 2, 3 and 5. This circuit regulates the correct compensation to be send to the driver) for controlling the waveform reshaping means to obtain a waveform in a good condition at a receiving end based on an output from the waveform analysis means.

4. With respect to claim 16, it is inherent that the regulator means of Tokuo is adjusted by statistical search method (given that register 2 stored typical data that will be used for compensation. The data has to be based on statistical data knowledge that the compensation has to be in a certain range).

Art Unit: 2819

5. With respect to claim 17, the apparatus of Tokuo teaches said statistical search method includes one or a combination of genetic algorithm, climbing-up method, annealing method, enumeration method, evolution policy, and taboo search method (the statistical data is based on genetic algorithm in that the values were obtain based on historical knowledge of the driver circuit).

6. With respect to claim 18, Tokuo teaches said waveform reshaping means includes a line driver circuit (7) of adding a current.

***Allowable Subject Matter***

7. Claims 19-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is an examiner's statement of reasons for allowance:

With respect to claim 19, the prior art does not teach a line driver circuit includes a plurality of constant current circuits with a current mirror circuit, a delay circuit of sending data, and a switching circuit for connecting the plurality of the constant current circuits to the line based on the sending data or an output from the delay circuit.

With respect to claim 20, the prior art does not teach a line is matched with a characteristic impedance from a sending end to a terminal end, a sense amp on the receiving end receives a mixture of the sending waveform and a total-reflection waveform, and a terminal resistance is inserted in the sending end so that the total-reflection waveform is not transmitted from the sending end through re-reflection, said waveform analysis means being connected to the sending end.

Art Unit: 2819

With respect to claim 21, the prior art does not teach a line has a structure that a TEM mode is maintained.

With respect to claim 24, the prior art does not teach a line has a driver circuit and a receiver circuit formed of a MOS-FET of Si or SiGe, or an n-channel MES-FET of GaAs, and includes a differential output circuit and differential input circuit without ground connection, a schottky high-speed bipolar differential circuit, or a bus-switch circuit; varactors having a structure of one of a complementarily same MOS-FET, MES-FET, and a bipolar transistor are arranged in all transistors; and complementary operating elements have a common well floated electrically.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don P. Le whose telephone number is 571-272-1806. The examiner can normally be reached on 7AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Barnie Rexford can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2819

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

5/17/2007

A handwritten signature in black ink, appearing to read 'Don Le', with a stylized, flowing script.

**DON LE**  
**PRIMARY EXAMINER**